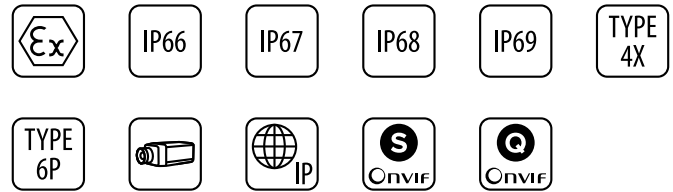


# MAXIMUS MMX

EX-PROOF FULL HD CAMERA IN A COMPACT DESIGN



MAXIMUS MMX, WALL BRACKET



MAXIMUS MMX, PARAPET OR CEILING BRACKET

## DESCRIPTION

The explosion-proof Full HD camera MAXIMUS MMX is perfect for efficient video surveillance and control of processes in hazardous environments where the atmosphere is potentially explosive due to the presence of inflammable gases or dust, typical of the Oil&Gas, marine or industrial and foodstuff sectors.

The Full HD, 1080p camera, with 3x or 10x motorised zoom lens, offers multiple video streams (H.264/AVC, MJPEG, JPEG, MPEG4) and provides exceptional image quality, picking out every detail in a scene, even in the harshest environmental conditions.

An absolute advantage offered by this camera is its extremely easy and safe installation. The camera can be supplied with multi-polar cabling. The camera can also be powered in PoE+, thereby allowing further simplification of installation operations. The camera is supplied with supports for wall, ceiling and railing installation and with a sunshield.

The housing is entirely manufactured in stainless steel AISI316L offering complete resistance to corrosion. Thanks to its compactness (only 116mm) and contained weight (only 6.5 kg (14.3lb)), it can be installed in narrow locations typical of industrial surroundings.

The IP66/IP67/IP68/IP69 level guarantees complete protection against bad weather and water immersion.

Another important feature of the camera is the extended certification temperature range of -40°C to 70°C.

The MAXIMUS MMX range of cameras meets every installation need, providing maximum performance and excellent value for money.

The MAXIMUS MMX product with 10x Full HD camera is Lloyd's Register Type Approval System Test Specification Number 1 certified and therefore can be used in Marine and Offshore applications for environmental categories ENV1, ENV2, ENV3 and ENV5.

## CERTIFICATIONS



## MAIN FEATURES

Certifications for use in Zones 1 and 2, IIB T6 or T5 Group (Gas) and in Zones 21 and 22, IIIC T85°C or T100°C Group (Dust)

Certification temperature: from -40°C (-40°F) up to +70°C (158°F)

Marine Certification: Lloyd's Register Marine Type Approval

AISI 316L stainless steel construction

Supports for ceiling, wall and parapet installation supplied

Camera Full HD 1080p, 3x or 10x Day/Night

Video compression H.264/AVC, MJPEG, JPEG and MPEG4

Up to 3 simultaneous video streams

Optional 4m (13ft) or 10m (33ft) preinstalled armoured multipolar cable with cable gland

Power supply: 24Vdc, 24Vac, PoE+

IP66/IP67/IP68/IP69

## TECHNICAL DATA

### MECHANICAL

AISI 316L stainless steel construction

External shot peened and electro-polished surfaces

Sunshield

Supports for wall, ceiling or parapet installation

Unit weight:

- 6.5kg (14.3lb) (housing only + mounting bracket)
- 8.5kg (18.7lb) (housing with 4m (13ft) multi-polar cable shield)

### CABLE GLANDS

Cable entry: 1 hole, 1/2" NPT

Cable gland with gasket Ex d 1/2"NPT (with pre-installed cable only)

### HOUSING'S WINDOW

Material: Thermally tempered glass

Usable diameter: 73.5mm (2.9in)

### ELECTRICAL

Supply voltage/Current consumption

- 24Vac, 1.32A, 50/60Hz
- 24Vdc, 0.9A
- PoE+ (IEEE 802-at)

Power consumption:

- 21W (24Vac, 1.32A, 50/60Hz)
- 20W (24Vdc, 0.9A)
- 21W (PoE+)

Armoured cable

- External diameter: 18.6mm (0.73in)±0.2mm (0.008in)
- Diameter under armature: 13.8mm (0.54in)
- Colour: black RAL 9005

Armoured cable composition:

- 3x1mm<sup>2</sup> (17AWG)
- 4x2x0.22mm<sup>2</sup> (24AWG) (cat. 5E F/STP)

### NETWORK

Ethernet connection: 100 Base-TX

Connector: RJ45

Communication protocol: ONVIF, Profile S and Profile Q

Device configuration: TCP/IPv4, UDP/IPv4, HTTP, NTP, DHCP, WS-DISCOVERY, IGMP (Multicast)

Web Server

Firmware and configuration upgrade via web pages and ONVIF protocol.

## VIDEO

Video encoder

- Streaming: RTSP, RTCP, RTP/IPv4, HTTP
- Video compression: H.264/AVC, MJPEG, JPEG, MPEG4
- 3 independent video streams Full HD
- Image resolution: from 320x180 up to 1920x1080 in 6 steps
- Selectable frame rate from 1 to 60 images per second (fps) (camera 10x)
- Selectable frame rate from 1 to 30 images per second (fps) (camera 3x)

## CAMERAS

Day/Night Full HD 3x

Resolution: Full HD 1080p (1920x1080pixel)

Signal system: max 1080p/30fps

Image Device: 1/2.8 type Exmor™ CMOS sensor

Effective pixels: 3.27Megapixel

Minimum Illumination, colour (ICR-OFF):

- 1lx, 1/30s, F1.2, 50% (Normal mode)
- 0.25lx, 1/30s, F1.2, 50% (High sensitivity mode)

Minimum Illumination, B/W (ICR-ON):

- 0.1lx, 1/30s, F1.2, 50% (Normal mode)
- 0.03lx, 1/30s, F1.2, 50% (High sensitivity mode)

Lens:

- From f= 3.0mm (wide) up to 9.0mm (tele)
- From F1.2 up to F2.1

Zoom: 3x (36x with digital zoom)

Horizontal Viewing Angle: From 90° (wide) up to 32° (tele)

Minimum object distance: 300mm (11.8in) (wide to tele)

Shutter speed: From 1/1s up to 1/10000s, 22 steps

White balance: Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium vapor lamp (Fix, Auto), Manual

Wide Dynamic Range: On/Off

Exposure Control: Auto, Manual, Priority (Shutter priority, Iris priority), Brightness

S/N Ratio: 50dB

Gain limit: up to 28dB

Backlight Compensation

## Day/Night Full HD 10x

Resolution: Full HD 1080p (1920x1080pixel)

Signal system: 1080p/60fps max

Image Device: 1/2.8 type Exmor™ CMOS sensor

Effective pixels: 2.38Megapixel

Minimum Illumination, colour (ICR-OFF):

- 1.4lx, 1/30s, 50% (Normal mode)
- 0.35lx, 1/30s, 50% (High sensitivity mode)
- 0.19lx, 1/3s, 50% (Normal mode)
- 0.05lx, 1/3s, 50% (High sensitivity mode)

Minimum Illumination, B/W (ICR-ON):

- 0.12lx, 1/30s, 50% (Normal mode)
- 0.03lx, 1/30s, 50% (High sensitivity mode)
- 0.002lx, 1/3s, 30% (High sensitivity mode)

Lens:

- From f= 3.8mm (wide) up to 38mm (tele)
- From F1.8 up to F3.4

Zoom: 10x (120x, with digital zoom)

Horizontal Viewing Angle: From 67° (wide) up to 7.6° (tele)

Minimum object distance: From 10mm (0.4in) (wide) up to 800mm (31.4in) (tele)

Shutter speed: From 1/1s up to 1/10000s, 22 steps

White balance: Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium vapor lamp (Fix, Auto, Outdoor Auto), Manual

Wide Dynamic Range: On/Off/Visibility enhancer, Light level, Brightness Compensation selection, Compensation level

Exposure Control: Auto, EV Compensation, Manual, Priority (Shutter priority, Iris priority), Brightness, Slow AE

S/N Ratio: 50dB

Gain limit: up to 43.5dB

De-fog: Yes (On/Off)

Backlight Compensation

## ENVIRONMENT

For installation indoors and outdoors

Operating temperature: from -40°C (-40°F) up to +65°C (149°F)

Certification temperature: from -40°C (-40°F) up to +65°C (149°F) (T6/T85°C) or +70°C (158°F) (T5/T100°C)

Relative humidity: from 10% up to 95% (no condensation)

## CERTIFICATIONS

ATEX (EN 60079-0: 2012+A11: 2013, EN 60079-1: 2014, EN 60079-31: 2014)

IECEX (IEC 60079-0: 2011 Ed.6, IEC 60079-1: 2014-06 Ed.7, IEC 60079-31: 2013 Ed.2)

EAC EX (TR CU 012/2011)

UL listed for USA (UL 60079-0 Ed.6, UL 60079-1 Ed.7, UL 60079-31 Ed.2)

UL listed for Canada (C22.2 NO. 60079-0:15, C22.2 NO. 60079-1:16, C22.2 NO. 60079-31:15)

Lloyd's Register Marine Type Approval (only for models with Day/Night camera 10X zoom, FullHD)

- Test Specification Number 1:2015 (ENV1, ENV2, ENV3, ENV5)

TYPE 6P, TYPE 4X (UL50E)

IP protection degree (EN/IEC60529):

- IP66
- IP67
- IP68
- IP69

## ACCESSORIES

OCTEX1/2C Cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable  
IECEX-ATEX-EAC Ex

OCTEXA1/2C Cable gland in nickel-plated brass EX 1/2" NPT armoured cable  
IECEX-ATEX-EAC Ex

OCTEXS1/2C Cable gland in nickel-plated brass EX 1/2" NPT, unarmoured cable  
IECEX-ATEX-EAC Ex

*For further details about cable glands part numbers, please refer to the relevant table.*

## BRACKETS AND ADAPTORS

MMXCWCOL Pole and corner adaptor module in stainless steel AISI 316L

## PACKAGE

Model Number	Weight	Dimensions (WxHxL)	Master carton
MMX2COZA	8kg (18lb)	32.5x19x23cm (12.8x7.5x9in)	2
MMX2CAZA	11kg (24.2lb)	64x20.8x59cm (25.2x8.2x23.2in)	-
MMX2CBZA	14kg (31lb)	64x20.8x59cm (25.2x8.2x23.2in)	-

### 1/2" NPT CABLE GLAND SELECTION GUIDE

Cable gland type	Certification	Operating temperature	Cable	Cable glands product code	Diameter of the external cable (mm)	Under armor cable diameter (mm)
With gasket	IECEX/ATEX/EAC Ex	-60°C / +100°C (-76°F / +212°F)	Unarmoured cable	OCTEX1/2C	3.2 - 8 (0.13 - 0.3in)	–
			Unarmoured cable	OCTEXS1/2C	6.5 - 11.9 (0.26 - 0.47in)	–
			Armoured cable	OCTEXA1/2C	12.5 - 20.5 (0.49 - 0.8in)	10 - 14.3 (0.4 - 0.56in)

### MAXIMUS MMX - CERTIFICATIONS AND MARKINGS (WITH CABLE)

Certification	Marking	Ambient temperature
ATEX	Ex II 2 G Ex db IIB T6...T5 Gb Ex II 2 D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C
IECEX	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C
EAC Ex	Ex II 2G Ex db IIB T6...T5 Gb Ex II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C

### MAXIMUS MMX - CERTIFICATIONS AND MARKINGS (WITHOUT CABLE)

Certification	Marking	Ambient temperature
ATEX	Ex II 2 G Ex db IIB T6...T5 Gb Ex II 2 D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C
IECEX	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C
EAC Ex	Ex II 2G Ex db IIB T6...T5 Gb Ex II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +65°C or +70°C
Hazardous Location America	Class I, Zone 1, AEx db IIB T6...T5 Zone 21, AEx tb IIIC T85°C...T100°C Class I, Div 2 Group C, D Class II, Div 2 Group E, F and G	-40°C ≤ Ta ≤ +65°C or +70°C
Hazardous Location Canada	Ex db IIB T6...T5 Gb Ex tb IIIC T85°C...T100°C Db Class I, Div 2 Group C, D Class II, Div 2 Group E, F and G	-40°C ≤ Ta ≤ +65°C or +70°C

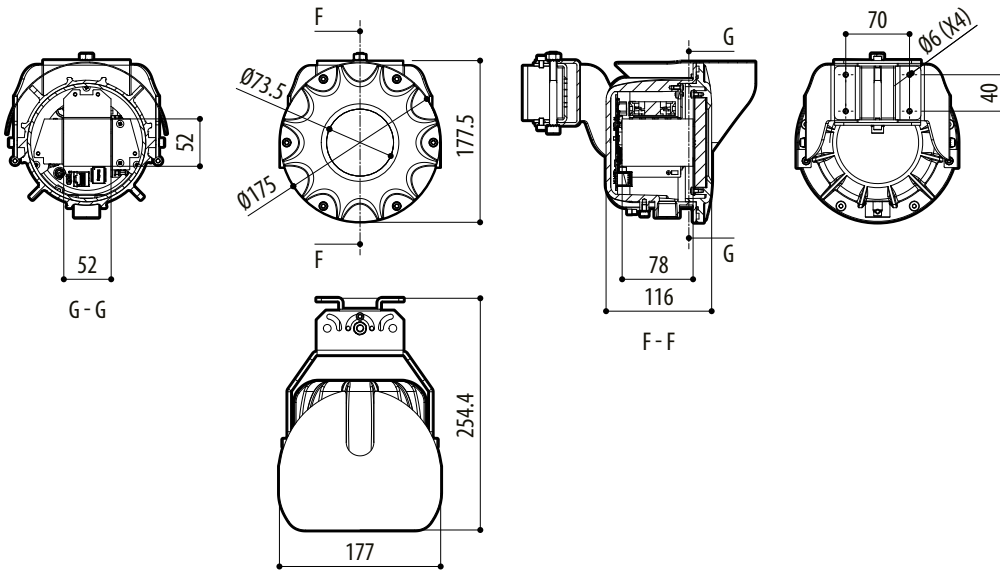
### MAXIMUS MMX - CONFIGURATION OPTIONS

	Voltage	Camera	Connections	Video Output	
<b>MMX</b>	<b>2</b> 24Vdc/ 24Vac, PoE+	<b>C</b> Day/Night camera 3X zoom, FullHD	<b>0</b> Without cable, without cable gland	<b>Z</b> IP H.264/AVC control, Protocol ONVIF, Profile S and Profile Q	<b>A</b>
		<b>G</b> Day/Night camera 10X zoom, FullHD	<b>A</b> Cable gland with gasket Ex d 1/2" NPT and 4m (13ft) armoured cable		
			<b>B</b> Cable gland with gasket Ex d 1/2" NPT and 10m (33ft) armoured cable		

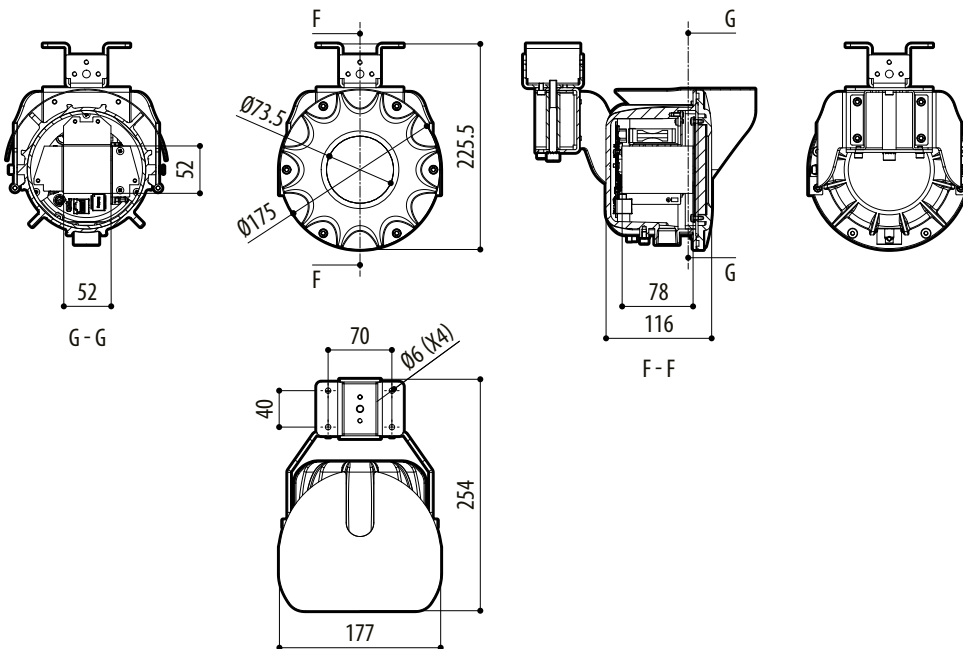
## TECHNICAL DRAWINGS

The dimensions of the drawings are in millimetres.

### WALL MOUNTING



### PARAPET OR CEILING MOUNTING



MAXIMUS MMX